

FOOD & MOOD



Dr. Sultan Mahmood

Chief Nutritionist

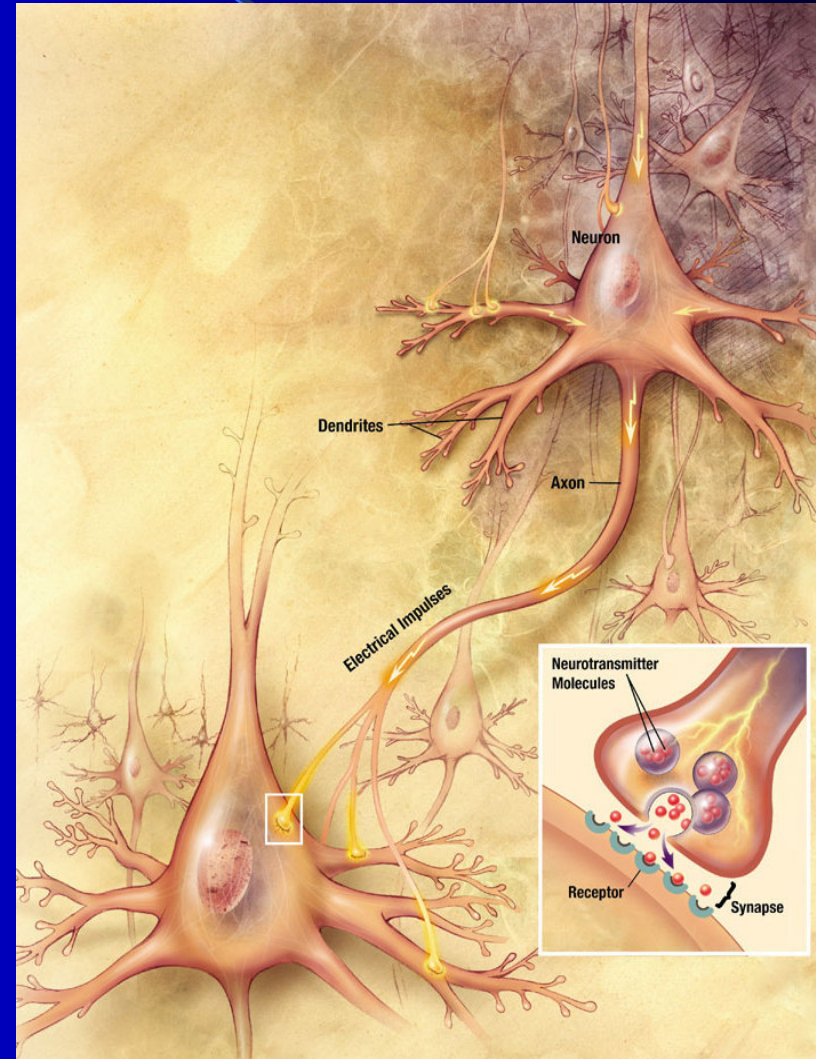
First DietCare & Research Center

Lahore, 8th January 2012

Cell: 0321.430.2528

Connection Between Food and Mood

The Physiology of Nutrition, confirms that **the connection between food and mood is – the serotonin.** It is a neurotransmitter (a chemical) present in the brain, nerve cells & gut and regulates signal intensity.



What Serotonin Does?

- Serotonin levels can dramatically **alter our behavior**. Levels too high can lead to sedation, whereas low levels are associated with debilitating psychiatric conditions and sudden infant death syndrome (SIDS).
- When serotonin levels are **low**, we're more **depressed**, and **when they're high**, we're **happier**. Many depression drugs target the serotonin system by attempting to artificially boost serotonin levels or sensitivity.

Serotonin in the Gut

Very few know that about **80 to 90 percent** of the human body's total **serotonin is found in specialized cells in our guts, not in our brains**. In fact, serotonin was tied to food long before it became an important mood hormone. In many species, **its directly tied to appetite** – deplete serotonin, and they act like they are starving. They hunt for food, put off mating and egg laying, and generally do whatever they can to find another bite to eat.

Gut Physiology & Serotonin

If you eat something that upsets your stomach cells, they release abundant amounts of serotonin. This flood of neurotransmitter causes the gut to empty, leading to **diarrhea**.

But if the serotonin overflows the gut's management system, it **leaks** into the blood, where it stimulates **5HT3** receptors in the brain which induces vomiting.

Because of this, some of those anti-depressants, particularly the SSRIs, frequently trigger nausea and vomiting as a **side effect**.

Serotonin and Nutrition

Foods of Impact

Omega-3 fatty acids, magnesium, tryptophan, folate and other B vitamins (thiamin or B2), low glycemic foods, and chocolate have all been studied to assess their impact on mood. A link between these foods and improved mood is proven.

The highest serotonin & Tryptophan levels are found in:

Greens	Meat	Dairy	Cereals
Walnut	Meat	Milk	Nuts
Pineapple	Turkey	Yogurt	Beans
Banana	Fish	Cheese	
Kiwi	Eggs		
Plum			
Tomato			

Factors Affecting the Serotonin Functioning

- Food, diet, way of cooking and eating environment
- Exercise
- Sleep
- Sunshine (more depression in cold & dark winters than shiny, warm summers)
- Self emotions and thinking areas
- Meditation, relaxation & talking to friends
- Counseling

Foods Alien To Mood

Worst Foods

- Fried in bad fat
- White chocolates
- Nitrate packed foods
- Fiber free cereals
- Three white poisons
- Alcohol
- Lump of caffeine

Bad Foods

- More starch less protein
- Ice cream
- Black tea
- Sugar, fat, salt combination
- Stale foods
- Long stored meat, fish, egg
- Long cooked veggies, bean

Conclusions

- **Over-eating** of carbohydrates and sugars can lead to decreased sensitivity to serotonin, leading to negative mood and physical side effects like obesity.
- Eating **lots of protein** can help balance serotonin levels.
- Eating serotonin-boosting foods **in the middle** of the day can make us drowsy and less focused due to its mild sedative effects.
- Candy bar or a soda (**sugar & caffeine**) are worst and have only temporary sugary energy boost which results in the sleep-inducing increases so consequently leading to much harder crash.

Conclusions....cont

- During **winters**, walking under the sun or getting away on vacation to somewhere tropical and sunny might be able to naturally boost serotonin levels.
- During **summers**, walking in the fresh air, sight –seeing, going away to enjoy nature (greenery, oceans, deserts, forests, waterfalls) will also help to boost serotonin.
- Meditation, yoga, charity, social service, talking to friends **relieve mood swings** through controlling serotonin.
- Thinking positive is the strongest social tool to optimize serotonin supply from the foods.

Conclusions....cont

- Sleep and exercise are strongly tied to serotonin.
- Lack of sleeping negatively affects brain's neural signaling and has been shown to desensitize serotonin pathways.
- Exercise is an economical and quick way to regenerate neurons.
- If we are outside lesser than we should be, sleeping odd or too few hours, exercising less, and generally eating poorer, all of these are causing our bodies serotonin levels to get out of control.



Comments?
Queries?
Questions?
Critics?
Case Studies?
Experiences?
Likes/Dislikes?



Feelings Chart

Benefit	Feeling	Impairment
Names woundedness and begins healing	Hurt	Resentment
Values and honors what is present or missed	Sadness	Self-Pity
Allows us to ask for help and reach out for relationship	Loneliness	Apathy
Helps us practice and prepare	Fear	Anxiety or Rage
Helps us tell the truth, dare to hope and abandon despair	Anger	Depression or Perfectionism
Awakens us to humility	Shame	Toxic Shame, Self-Rejection, Hide or Rage
Allows us to seek forgiveness	Guilt	Self-blame or Shame